

Neurochemical Research

Volume 5, 1980

EDITOR-IN-CHIEF

Abel Lajtha, Center for Neurochemistry, Ward's Island, New York

ASSOCIATE EDITORS

Norman Bass, University of Kentucky, Lexington, Kentucky

E. Martin Gál, University of Iowa, Iowa City, Iowa

EDITORS

Bernard W. Agranoff, University of Michigan, Ann Arbor, Michigan

Morris H. Aprison, Indiana University Medical Center, Indianapolis, Indiana

Lawrence Austin, Monash University, Clayton Victoria, Australia

Nicole A. Baumann, Hopital de la Salpetriere, Paris, France

Claude F. Baxter, VA Hospital, Sepulveda, California

Stephen C. Bondy, National Institute of Environmental Health Sciences, Triangle Park, North Carolina

Jorgen Clausen, Neurochemical Institute, Copenhagen, Denmark

Jack R. Cooper, Yale University School of Medicine, New Haven, Connecticut

Erminio Costa, St. Elizabeth's Hospital - WAW, Washington, D.C.

Carl W. Cotman, University of California, Irvine, California

Jill E. Cremer, MRC Toxicology Unit, Carshalton, England

Annica Dahlstrom, University of Göteborg, Göteborg, Sweden

Antonio Giuditta, International Institute of Genetics and Biophysics, Naples, Italy

Paul Greengard, Yale University School of Medicine, New Haven, Connecticut

Santiago Grisolia, Instituto de Investigaciones Citologica, Valencia, Spain

Michel Hamon, College de France, Paris, France

George A. Hashim, St. Luke's Hospital Center, New York, New York

Tong H. Joh, Cornell Medical Center, New York, New York

Graham A. R. Johnston, University of Sydney, Sydney, Australia

Harold Koenig, VA Research Hospital, Chicago, Illinois

Giulio Levi, Laboratory of Cell Biology, CNR, Rome, Italy

Walter M. Lovenberg, National Institutes of Health, Bethesda, Maryland

Paul Mandel, Centre de Neurochimie, CNRS, Strasbourg, France

Frank L. Margolis, Roche Institute of Molecular Biology, Nutley, New Jersey

Neville Marks, Center for Neurochemistry, Ward's Island, New York

William McClure, University of Southern California, Los Angeles, California

Bruce McEwen, Rockefeller University, New York, New York

Patrick L. McGeer, University of British Columbia, Vancouver, British Columbia

Norton H. Neff, St. Elizabeth's Hospital - WAW, Washington, D.C.

Norman S. Radin, University of Michigan, Ann Arbor, Michigan

Donald J. Reis, Cornell Medical Center, New York, New York

Sidney Roberts, UCLA School of Medicine, Los Angeles, California

Juan Sabater, Instituto de Bioquímica Clínica, Barcelona, Spain

Nikolaus Seiler, Centre de Recherche Merrell, Strasbourg, France

Otto Z. Sellinger, University of Michigan, Ann Arbor, Michigan

Genkichi Takagaki, Tokyo Metropolitan Institute for Neurosciences, Fuchu-City, Tokyo

N. M. van Gelder, University of Montreal, Montreal, Quebec

Antonia Vernadakis, University of Colorado Medical Center, Denver, Colorado

Maria Wollemin, Biological Research Center, Hungarian Academy of Sciences, Szeged, Hungary

Neurochemical Research is published monthly by Plenum Publishing Corporation, 227 West 17th Street, New York, N.Y. 10011. Subscription orders should be addressed to the publisher. *Neurochemical Research* is abstracted or indexed in Biological Abstracts, Chemical Abstracts, Current Contents, Excerpta Medica, Index Medicus, Referativnyi Zhurnal, and Science Citation Index. © 1980 Plenum Publishing Corporation. *Neurochemical Research* participates in the program of Copyright Clearance Center, Inc. The appearance of a code line at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use. However, this consent is given on the condition that the copier pay the stated per-copy fee through the Copyright Clearance Center, Inc. for all copying not explicitly permitted by Sections 107 or 108 of the U.S. Copyright Law. It does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale, nor to the reprinting of figures, tables, and text excerpts.

Subscription rates:

Volume 5, 1980 (12 issues) \$130.00 (outside the U.S., \$149.00).

Volume 6, 1981 (12 issues) \$155.00 (outside the U.S., \$177.00).

Neurochemical Research is published monthly by Plenum Publishing Corporation, 227 West 17th Street, New York, N.Y. 10011. Subscription orders should be addressed to the publisher. *Neurochemical Research* is abstracted or indexed in Biological Abstracts, Chemical Abstracts, Current Contents, Excerpta Medica, Index Medicus, Referativnyi Zhurnal, and Science Citation Index. © 1980 Plenum Publishing Corporation. *Neurochemical Research* participates in the program of Copyright Clearance Center, Inc. The appearance of a code line at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use. However, this consent is given on the condition that the copier pay the stated per-copy fee through the Copyright Clearance Center, Inc. for all copying not explicitly permitted by Sections 107 or 108 of the U.S. Copyright Law. It does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale, nor to the reprinting of figures, tables, and text excerpts.

Neurochemical Research

Volume 5, Number 1

January 1980

CONTENTS

ORIGINAL ARTICLES

- Anticonvulsant Activity of Cyclopentano Amino Acids 1
ROBERT ZAND and IVAN IZQUIERDO
- Stress-Induced Depression of Motor Activity Correlates with Regional Changes in Brain Norepinephrine but not in Dopamine 9
J. M. WEISS, W. H. BAILEY, L. A. POHORECKY, D. KORZENIOWSKI, and G. GRILLIONE
- Synaptosomal Uptake: The Modifying Effect of Mitochondria 23
R. COSTA-TIOZZO and E. M. GAL
- Peptide Length Requirement for Experimental Allergic Encephalomyelitis in Guinea Pigs 37
SHIMON LEVIT, JAMES M. POWERS, DEBRA MILEK, and STEVEN W. BROSTOFF
- Influence of Diet on the Acyl Composition of Phospholipids in Endothelial Cells and Mitochondria of Rat Brain 43
D. F. MATHESON, R. OEI, and BETTY I. ROOTS
- Measurement of Mouse Brain Glucose Utilization in Vivo Using [U-¹⁴C]Glucose 61
C. W. KAMP, D. A. MURSCH, W. B. STAVINOH, and M. A. MEDINA
- Effect of Food Restriction on Serotonin Metabolism in Rat Brain 69
S. KOHSAKA, K. TAKAMATSU, and Y. TSUKADA
- Compositional Changes in Soluble Proteins of Cerebral Mantle, Cerebellum, and Brain Stem of Rat Brain During Development: A Two-Dimensional Gel Electrophoretic Analysis 81
YUTAKA YOSHIDA and YASUO TAKAHASHI
- COMMENT
- On the Nonoccurrence of Ornithine Decarboxylase in Nerve Endings 97
NIKOLAUS SEILER and SHAKIR SARHAN

Neurochemical Research

Volume 5, Number 2

February 1980

CONTENTS

ORIGINAL ARTICLES

- Failure of Myelin Basic Protein to Prevent or Suppress Experimental Allergic Encephalomyelitis in Guinea Pigs 101
G. A. HASHIM
- Evidence for a Similar Compartmentation of Recaptured and Endogenously Synthesized Dopamine in Striatal Synaptosomes 115
FRANCA CERRITO, GIANNA CASAZZA, GUILIO LEVI, and MAURIZIO RAITERI
- On the Turnover of Polyamines Spermidine and Spermine in Mouse Brain and Other Organs 123
HERBERT ANTRUP and NIKOLAUS SEILER
- Characteristics of an Acid Active Thiamine Diphosphatase from Beef Brain 145
JEROME V. MURPHY, FRANK E. FRERMAN, and ALBERTINA HODACH
- Isolation and Purification of Multiple Forms of γ -Glutamyl Transpeptidase from Rat Brain 159
EDWARD REYES and THOMAS D. BARELA
- Synaptosomal Phospholipid Pool in Rabbit Brain and Its Effect on GABA Uptake 171
GIANNA EVELINA DE MEDIO, GIANFRANCO TROVARELLI, ANDERS HAMBERGER, and GIUSEPPE PORCELLATI
- Isolation of Rat Brain Subcellular Fraction Enriched in Putative Neurotransmitter Receptors and Synaptic Junctions 181
PAUL M. SALVATERRA and DEE ANN MATTHEWS
- A Simple, Reproducible Cell-Free System for Measuring Brain Protein Synthesis 197
JUAN L. FANDO and CLAUDE G. WASTERLAIN
- GABA Metabolism in Venezuelan Equine Encephalomyelitis Virus Infection 209
ERNESTO BONILLA, ELENA RYDER, and SLAVIA RYDER
- COMMENT
- Absence of Triphosphoinositide in the Chloroform-Methanol Extract of Cerebral Cortex Containing the Cholinergic Proteolipid 217
E. DE ROBERTIS, SARA FISZER DE PLAZAS, JUANA PASQUINI, and E. F. SOTO

Neurochemical Research

Volume 5, Number 3

March 1980

CONTENTS

OVERVIEW

- L-Kynurenine: Its Synthesis and Possible Regulatory Function in Brain 223
E. MARTIN GÁL and ARNOLD D. SHERMAN

ORIGINAL ARTICLES

- Mechanism by Which Uptake Inhibitors Antagonize *p*-Chloroamphetamine-Induced Depletion of Brain Serotonin 241
RAY W. FULLER
- In Vitro Polymerization of Glial Fibrillary Acidic (GFA) Protein Extracted from Multiple Sclerosis (MS) Brain 247
C. V. LUCAS, K. G. BENSCH, and L. F. ENG
- Lipid Metabolism of Developing Central Nervous Tissues in Organotypic Cultures. III. Ganglionic Control of Glycerolipids and Fatty Acids in Cortex Grey Matter 257
MICHAEL GIESING and FRIEDRICH ZILLIKEN
- In Vitro Protein Synthesis Activity of Poly(A) RNA from Neuroblastoma Cells 271
A. CUPPELO, A. DIERICH, P. MANDEL and M. WINTZERITH
- A Reevaluation of Veratridine as a Tool for Studying the Depolarization-Induced Release of Neurotransmitters from Nerve Endings 281
GIULIO LEVI, VITTORIO GALLO, and MAURIZIO RAITERI
- Differential Effects of Benztropine and Desipramine on the High Affinity Uptake of Paratyramine in Slices of the Caudate Nucleus and Hypothalamus 297
E. H. PETRALI
- Aging and Rat Brain Muscarinic Receptors as Measured by Quinuclidinyl Benzilate Binding 301
ANNE M. MORIN and CLAUDE G. WASTERLAIN
- Regional Distributions of γ -Aminobutyric Acid (GABA), Glutamate Decarboxylase (GAD), and γ -Aminobutyrate Transaminase (GABA-T) in the Central Nervous Brains of C57/BR, C3H/He, and F₁ Hybrid Mice 309
M. M. GABELLEC, M. RECASENS, R. BENEZRA, and P. MANDEL
- A Comparison of Composition and Fluidity of Multiple Sclerosis and Normal Myelin 319
J. M. BOGGS and M. A. MOSCARELLO
- Levels of Several Amino Acids in the Cerebellar Peduncles and Four Medullary Nuclei of Control and 3-Acetylpyridine-Treated Rats 337
W. J. MCBRIDE, M. A. REA, D. L. FELTEN, N. SINISI, and B. H. ROHDE
- Inhibition of Potassium-Stimulated Release of [³H]Dopamine from Rat Striata as a Result of Prior Exposure to Cocaine, Nomifensine, or Mazindol 345
DOROTHY DEMBIEC

ANNOUNCEMENT

Neurochemical Research

Volume 5, Number 4

April 1980

CONTENTS

ORIGINAL ARTICLES

- Differential Turnover of Axonally Transported Glycoproteins 351
J. A. RIPELLINO and J. S. ELAM
- De Novo Synthesis of Neuron-Specific Enolase in a Rabbit Reticulocyte Translation System Programed by Poly(A)-RNA From Rat Brain 361
WILLIAM A. WALKER and CLAIRE ZOMZELY-NEURATH
- Age-Dependent Changes in Brain Protein Synthesis in the Rat 373
JUAN L. FANDO, MATILDE SALINAS, and CLAUDE G. WASTERLAIN
- Regional Distribution of Choline Acetyltransferase and Acetylcholinesterase in Rabbit Brain 385
B. HETNARSKI, H. M. WISNIEWSKI, K. IQBAL, J. DZIEDZIC, and A. LAJTHA
- Cyclobutane Analogs of GABA 393
R. D. ALLAN, D. R. CURTIS, P. M. HEADLEY, G. A. R. JOHNSTON, S. M. E. KENNEDY, D. LODGE, and B. TWITCHIN
- Synaptic Junctional Glycoconjugates from Chick Brain: Glycoprotein Identification and Carbohydrate Composition 401
JOSEPH C. WEBSTER and JACK D. KLINGMAN
- Tryptophan and Phenylalanine Transport in Rat Cerebral Cortex Slices as Influenced by Sodium Ions 415
E. R. KORPI
- Subsynaptosomal Distribution of ^{45}Ca Taken up by Synaptosomes in High-Potassium Medium 433
SEIJI ICHIDA, CHE-HUI KUO, and HIROSHI YOSHIDA
- Synthesis of Taurine in Rat Liver and Brain in Vivo 441
H. PASANTES-MORALES, F. CHATAGNER, and P. MANDEL
- COMMENTS
- Amniotic Fluid and Maternal Serum Amino Acid Levels in Malformations of Fetal Central Nervous System 453
SUDHIR KUMAR, JAMES R. FOREMAN, and MANOHAR RATHI
- Receptor Studies on Isolated Astroglial Cell Fractions Prepared With and Without Trypsin 459
FRITZ A. HENN, JAMES DEERING, and DAVID ANDERSON

Neurochemical Research

Volume 5, Number 5

May 1980

CONTENTS

ORIGINAL ARTICLES

- Evaluation of the Binding of Serotonin by Isolated CNS Acidic Lipids 465
JOHN R. YANDRASITZ, ROBERT M. COHN, BARBARA MASLEY, and
DANIEL DELROWE
- Properties of LHRH Release from a Hypothalamic Synaptosomal Fraction of
Estrogen-Primed Ovariectomized Rats 479
MICHAEL TYTELL, J.H. CLARK, and E.J. PECK, JR.
- Effects of Estrogen and Progesterone on LHRH Release from a Hypothalamic
Synaptosomal Fraction of Ovariectomized Rats 493
MICHAEL TYTELL, J.H. CLARK, and E.J. PECK, JR.
- Evoked Release of Tissue-Bound Exogenous [$1-^{14}\text{C}$] Acetylcholine from Rat Brain
Cortex Slices 505
D.S. GREWAAL and J.H. QUASTEL
- Cell-Free Synthesis of Glial Fibrillary Acidic Protein 513
PIERRE BÉGUIN, ERIC M. SHOOTER, and LAWRENCE F. ENG
- Electrically Induced Release of Amino Acids Formed from (U^{14}C) Glucose in Rat
Brain Cortex Slices, Studied by a Simplified Dansylation Procedure 523
FERNANDO ORREGO and MARÍA DEL CARMEN DORIA DE LORENZO
- Physicochemical Approaches to the Alcohol-Membrane Interaction in Brain 537
ALBERT Y. SUN and RICHARD N. SEAMAN
- Purification of Guanine Deaminase Inhibitor from Human Brain 547
SUDHIR KUMAR and MANOHAR RATHI
- An Improved Apparatus for Blood Perfusion of the Canine Cerebral Vasculature 551
LESTER R. DREWES
- High-Affinity Taurine Uptake in Developing Retina 561
R. SALCEDA
- Carbonic Anhydrase Distributions in Central and Peripheral Nervous System of the
Rat 573
MICHAEL C. TRACHTENBERG and VICTOR S. SAPIRSTEIN
-

Neurochemical Research

Volume 5, Number 6

June 1980

CONTENTS

ORIGINAL ARTICLES

- | | |
|--|-----|
| Effect of Anoxia and Hypoxia on Brain Lipid Metabolism
J. STROSZNAJDER and K. DOMAŃSKA-JANIK | 583 |
| Specific Binding of Kainic Acid to Purified Subcellular Fractions from Rat Brain
MANUEL NIETO-SAMPEDRO, DAVID SHELTON, and CARL W. COTMAN | 591 |
| Effect of Inorganic Lead Exposure on Myelination in the Rat
ARREL D. TOEWS, MARTIN R. KRIGMAN, DAVID J. THOMAS, and PIERRE MORELL | 605 |
| Retention of a Dialkylphosphatidylcholine in Myelin and Other Membranes
H. BROCKERHOFF, H. M. WISNIEWSKI, L. C. LIPTON, and D. S. DESHMUKH | 617 |
| Arachidonic Acid-Induced Swelling in Incubated Rat Brain Cortical Slices: Effect of Bovine Serum Albumin
PAK H. CHAN, ROBERT A. FISHMAN, JANIE L. LEE, and SUSAN C. QUAN | 629 |
| [³ H]-Amino-6,7-Dihydroxy-1,2,3,4-Tetrahydronaphthalen (ADTN): Regional Distribution and in Vivo Binding after Acute and Chronic Drug Treatment
YVONNE CLEMENT-CORMIER and CHARLES E. SMITH | 641 |
| 16 S Acetylcholinesterase in Endplate-Free Regions of Developing Rat Diaphragm
JANEZ SKETELJ and MIRO BRZIN | 653 |
| Plasma Amino Acids in 3/sec Spike-Wave Epilepsy
NICO M. VAN GELDER, NAJMA ASLAM JANJUA, KATHERINE METRAKOS, BRENDA MACGIBBON, and JULIUS D. METRAKOS | 659 |
| Calmodulin in Brain of Schizophrenics
F. VARGAS and A. GUIDOTTI | 671 |
-

Neurochemical Research

Vol. 5, No. 7

July 1980

CONTENTS

ORIGINAL ARTICLES

- Changes in the Content and Acyl Group Composition of Glycerophospholipids of Brain Endothelial Cells of the Developing Rat 683
D. F. MATHESON, R. OEI, and BETTY I. ROOTS
- Titration of Human Brain Type-B Monoamine Oxidase 697
CHRISTOPHER J. FOWLER, ÅSA WIBERG, LARS ORELAND,
and BENGT WINBLAND
- Effects of α -Methylphenylalanine Plus Phenylalanine Treatment during Development on Myelin in Rat Brain 709
RONALD C. JOHNSON and SHANTILAL N. SHAH
- [^{3} H]Acetylcholine and [^{3} H]5-Hydroxytryptamine Release from Rat Midbrain Slices and the Effects of Calcium and Phenobarbital 719
JUDITH A. RICHTER and SUSAN K. JACKSON
- Antigenic Properties of the Loosely Bound Subnuclear Fraction of Rat Brain 731
FABRIZIO MICHETTI
- Transmembrane Orientation of Lipophilin in Phosphatidylcholine Vesicles 745
D. D. WOOD, J. M. BOGGS, and M. A. MOSCARELLO
- Immunochemical Determination and Immunocytochemical Localization of Brain-Specific Protein α -Albumin (GFA) in Isolated Astrocytes 757
J. GHEUENS, M. NOPPE, D. KARCHER, and A. LOWENTHAL
- Action of Barbiturates on Activity of Acetylcholinesterase from Synaptosomal Membranes 769
ANNA PASTUSZKO
- Heterogeneity of Intermediate Filament Proteins from Rabbit Spinal Cord 777
HENRYK CZOSNEK, DAVID SOIFER, and HENRYK M. WISNIEWSKI
- Enhancement of Synaptic Vesicle Attachment to the Plasma Membrane Fraction by Copper 795
WAYNE HOSS and MICHELE FORMANIAK
- Improved Sensitivity of Glutamine Synthetase Assay and of Acyl Hydroxamates 805
KHALID IQBAL and J. H. OTTAWAY

Neurochemical Research

Volume 5, Number 8

August 1980

CONTENTS

ORIGINAL ARTICLES

- Regional Distribution of the Muscarinic Cholinoceptor and Acetylcholinesterase in Guinea Pig Brain 809
R. M. DAWSON and B. JARROTT
- Certain Aspects of Acetylcholine Metabolism in Teleost Retina 817
I. M. VIVAS and B. D. DRUJAN
- Study of Some Enzyme Activities in Cultured Chick Embryo Brain Nerve Cells Treated by Chick Embryo Brain Extracts 831
Y. CAM, M. LEDIG, A. EBEL, M. SENSENBRENNER, and P. MANDEL
- Development of Glial Cells in Primary Cultures: Energy Metabolism and Lactate Dehydrogenase Isoenzymes 847
G. THOLEY, B. F. ROTH-SCHECHTER, and P. MANDEL
- Brain Nucleic Acids and Protein in Various Neurological Mutant Mice 855
M. WINTZERITH, L. SARLIEVE, A. DIERICH, and P. MANDEL
- Anti-Catechol-*O*-Methyltransferase: Demonstration of Specificity and Immunological Cross-Reactivity with the Enzyme from Rat Liver, Kidney, Brain, and Choroid Plexuses 869
G. P. KAPLAN, B. K. HARTMAN, and C. R. CREVELING
- Serotonin and Norepinephrine: Long-Term Decrease in Rate of Synthesis in Brain of Rats Primed with *p*-Chlorophenylalanine 879
GEORGE J. ALEXANDER, LENORE M. KOPELOFF, and RITA B. ALEXANDER
- Developmental Dissociation of Myelin Synthesis and "Myelin-Associated" Enzyme Activities in the Shiverer Mouse 885
T. D. BIRD, D. F. FARRELL, S. STRANAHAN, and E. AUSTIN
- Serotonin in Experimental Histidinemia 897
OLIVIER DOUAY and PIERRE P. KAMOUN
- Acetylcholine Esterase Sensitivity to Chronic Administration of Diphenylhydantoin and Effects on Cerebral Enzymatic Activities Related to Energy Metabolism 905
G. BENZI, E. ARRIGONI, R. SCELSI, F. MARZATICO, and R. F. VILLA
- COMMENT
- Axonal Transport of Putrescine and the Polyamines 913
NICHOLAS A. INGOGLIA and JOHN A. STURMAN
- ANNOUNCEMENT 915

Neurochemical Research

Volume 5, Number 9

September 1980

CONTENTS

SPECIAL ISSUE DEDICATED TO J. H. QUASTEL, FRS

FOREWARD

- J. H. Quastel, FRS 919
BERNARD HABER, Issue Editor, and ABEL LAJTHA, Editor-in-Chief

ORIGINAL ARTICLES

- Control of Aerobic Glycolysis in the Brain In Vitro 921
A. M. BENJAMIN and Z. H. VERJEE
- Collagenase-Releasable and -Resistant Cholinesterases in Normal and Dystrophic Muscles 935
S. C. SUNG
- Purification and Immunochemical Properties of Choline Acetyltransferase from Human Brain 943
J. H. PENG, P. L. MCGEER, H. KIMURA, S. C. SUNG, and E. G. MCGEER
- Characterization of Separated Cell Types from Developing Rat Cerebellum: Transport of [³H] GABA by Preparations Enriched in Purkinje Cells and Astrocytes 963
J. COHEN, R. BALÁZS, and P. L. WOODHAMS
- Phospholipid Methyltransferase Asymmetry in Synaptosomal Membranes 983
FULTON T. CREWS, FUSAO HIRATA, and JULIUS AXELROD
- Role of Carbon Dioxide Fixation, Blood Aspartate and Glutamate in the Adaptation of Amphibian Brain Tissues to a Hyperosmotic Internal Environment 993
KEN H. TACHIKI and CLAUDE F. BAXTER
- Degradation of Prolylleucylglycinamide (MIF) by Mouse Brain 1011
A. NEIDLE, N. YESSAIAN, and A. LAJTHA
- Ethanol-Induced Changes in Properties of Rat Brain Ribosomes 1025
SUJATA TEWARI, FRANK M. SWEENEY, and EUGENE W. FLEMING
- Primary Afferent Depolarization: Distribution of the γ -Aminobutyric Acid System in Frog Spinal Cord 1037
S. GLUSMAN, M. PACHECO, D. MCADOO, and B. HABER
-

Neurochemical Research

Volume 5, Number 10

October 1980

CONTENTS

OVERVIEW

- Physiological and Behavioral Studies with Muscimol 1047
FRANCIS V. DEFEUDIS

ORIGINAL ARTICLES

- Effect of Modification of Synaptosomal Membrane Glycoproteins on Adenylate Cyclase Activity 1069
MAGDALENA ROSSOWSKA and LEILI KHACHATRIAN
- Effects of the Ionophores X537A and A23187 on GABA, Glycine, and Taurine Release from Chick Retinal Subcellular Fractions 1077
H. PASANTES-MORALES and O. QUESADA
- Fluorometric Determination of Octopamine in Tissue Homogenates by High-Performance Liquid Chromatography 1089
LEROY D. MELL, JR., and DAVID O. CARPENTER
- Monoamine Regulation of Adenosine 3',5'-Monophosphate in Homogeneous Neuronal Cultures from Chick Brain Hemispheres 1097
JAROSLAVA CIESIELSKI-TRESKA and GABRIELLE ULRICH
- Stability of the Glutamate Content of Synaptosomes During Their Preparation 1107
J. W. GEDDES, J. D. NEWSTEAD, and J. D. WOOD
- Perinatal Changes in Amino Acid Metabolism of Rat Brain, Especially Alanine and Glutamic Acid 1117
TETSUYA NOGUCHI, MASAHIKO NOMURA, and YASUZO TSUKADA
- Fate of Axonally Transported Taurine and Proteins in the Developing Rabbit Visual System Following Optic Nerve Section 1127
JOHN A. STURMAN and CAROLJO KASHDAN
- Myelin Lipophilin-Induced Demyelinating Disease of the Central Nervous System 1137
G. A. HASHIM, D. D. WOOD, and M. A. MOSCARELLO
- Two Forms of GABA Transaminase in Pig Brain: Purification and Properties 1147
M. BLOCH-TARDY, A. BUZENET, C. FAGES, B. ROLLAND, and P. GONNARD
-

Neurochemical Research

Volume 5, Number 11

November 1980

CONTENTS

ORIGINAL ARTICLES

- Effect of Ethanol on Superoxide Dismutase Activity in Cultured Neural Cells 1155
MARC LEDIG, JEAN-RÉMY M'PARIA, JEAN-CLAUDE LOUIS, RAINER FRIED,
and PAUL MANDEL
- Uptake of Piperidine and Pipecolic Acid by Synaptosomes from Mouse Brain 1163
Y. NOMURA, T. SCHMIDT-GLENEWINKEL, and E. GIACOBINI
- Axonal Transport of Glycerophospholipids Following Intracerebral Injection of Glyc-
erol into Substantia Nigra or Lateral Geniculate Body 1175
ARREL D. TOEWS, STEPHANIE S. PADILLA, L. JACK ROGER, and PIERRE
MORELL
- Role of Calcium Ions in the Formation and Release of Low-Molecular-Weight Sub-
stances from Optic Nerve Terminals 1185
MATS SANDBERG, ANDERS HAMBERGER, INGEMAR JACOBSON, and JAN-OLOF
KARLSSON
- Immunoperoxidase Staining of Glial Fibrillary Acidic (GFA) Protein Polymerized in
Vitro: An Ultramicroscopic Study 1199
C. V. LUCAS, E. P. REAVEN, K. G. BENSCH, and L. F. ENG
- Effects of Postdecapitative Ischemia and Hypoxia on the Phosphoglyceride Acyl
Groups of Rat Brain Membranes 1211
G. Y. SUN, R. MANNING, and J. STROSZNAJDER
-

Neurochemical Research

Volume 5, Number 12

December 1980

CONTENTS

ORIGINAL ARTICLES

- Cholinesterase in Muscle of Dystrophic Hamsters (Bio-40.54) 1221
NANINE S. HENDERSON, CHARLES D. TWEEDLE, and JON J. KABARA
- Studies on Distribution and Metabolism of Valproate in Rat Brain, Liver, and Kidney 1231
M. I. ALY and A. A. ABDEL-LATIF
- Glycoproteins and Glycopeptides in the Chromaffin Granule Membrane 1243
L. GIORGIO RODA, EMILY P. SLATER, and RUTH A. HOGUE-ANGELETTI
- Deprivation of Paradoxical Sleep: Effect on Weight and Nucleic Acid Content of Liver and Brain 1251
STEFANIA BALESTRIERI, GIUSEPPE D'ONOFRIO, and ANTONIO GIUDITTA
- Incorporation of Linoleic Acid into Membrane Glycerophospholipids from Rat Brain Submitted to Ischemia and Hypoxia 1265
JOANNA STROSZNAJDER
- Development of [^3H]Muscimol Binding to Subcellular Particles of a Culture of Mouse Brain 1279
L. L. SARLIÈVE, F. V. DEFEUDIS, L. OSSOLA, V. VARGA, and P. MANDEL
- Endogenous Peptide(s) Inhibiting [^3H]Cocaine Binding in Mouse Brain 1291
M. E. A. REITH, H. SERSHEN, and A. LAJTHA
- ANNOUNCEMENTS 1301
- AUTHOR INDEX 1303
- SUBJECT INDEX 1307